

THAT WHICH IS CLAIMED IS:

1. A dynamoelectric machine comprising:
a rotor and a stator surrounding said rotor;
said rotor comprising rotor windings defining at least one pair
of first and second rotor winding ends arranged in spaced relation; and
5 at least one rotor winding series connector connecting said at
least one pair of first and second rotor winding ends together in series and
comprising
a C-shaped connector body having a medial connector
portion and respective first and second end connector portions
10 extending outwardly therefrom, and
first and second connector brackets carried by the
respective first and second end connector portions and receiving the
respective first and second rotor winding ends therein.
2. A dynamoelectric machine according to Claim 1
wherein said at least one pair of first and second rotor winding ends
comprises a plurality of first rotor winding ends arranged in stacked relation
and a plurality of second rotor winding ends arranged in stacked relation;
5 and wherein said at least one rotor winding series connector comprises a
corresponding plurality thereof with one rotor winding series connector for
each pair of first and second rotor winding ends.
3. A dynamoelectric machine according to Claim 2
wherein successive pairs of said plurality of first and second rotor winding
ends define progressively increasing spacings therebetween; and wherein
successive ones of said plurality of rotor winding series connectors have
5 respective medial connector portions having progressively increasing
lengths to correspond to the progressively increasing spacings.
4. A dynamoelectric machine according to Claim 2 further
comprising insulating material between adjacent ones of said plurality of
first rotor end windings, between adjacent ones of said plurality of second

rotor end windings, and between adjacent ones of said plurality of rotor
5 winding series connectors.

5. A dynamoelectric machine according to Claim 1
wherein said C-shaped connector body comprises a flexible conductive
material.

6. A dynamoelectric machine according to Claim 5
wherein said flexible conductive material comprises a plurality of stacked
metal layers.

7. A dynamoelectric machine according to Claim 6
wherein each of said stacked metal layers comprises copper.

8. A dynamoelectric machine according to Claim 1
wherein said at least one rotor winding series connector further comprises
insulating material adjacent outer surface portions of at least one of said C-
shaped connector body and said first and second connector brackets.

9. A dynamoelectric machine according to Claim 1
wherein said at least one rotor winding series connector further comprises
a respective brazed joint between said C-shaped connector body and
adjacent portions of said first and second rotor winding ends.

10. A dynamoelectric machine according to Claim 1
wherein each of said first and second connector brackets has an L-shape
with a first leg extending outwardly from adjacent portions of said
respective first and second end connector portions of said C-shaped
5 connector body and a second leg extending generally parallel thereto.

11. A dynamoelectric machine according to Claim 1
wherein each rotor winding comprises a metallic bar conductor.

12. A rotor winding series connector for a dynamoelectric
machine comprising a rotor and a stator surrounding the rotor, the rotor

comprising rotor windings defining at least one pair of first and second rotor winding ends arranged in spaced relation, the rotor winding series
5 connector comprising:

a C-shaped connector body comprising flexible conductive material arranged in a plurality of stacked layers to define a medial connector portion and respective first and second end connector portions extending outwardly therefrom; and
10 first and second connector brackets carried by the respective first and second end connector portions and for receiving the respective first and second rotor winding ends therein.

13. A rotor winding series connector according to Claim 12 further comprising insulating material adjacent outer surface portions of at least one of said C-shaped connector body and said first and second connector brackets.

14. A rotor winding series connector according to Claim 12 wherein said C-shaped connector body comprises copper.

15. A rotor winding series connector according to Claim 12 wherein each of said first and second connector brackets has an L-shape with a first leg extending outwardly from adjacent portions of said respective first and second end connector portions of said C-shaped
5 connector body and a second leg extending generally parallel thereto.

16. A generator apparatus comprising:
a shaft;
a generator rotor carried by said shaft, and a generator stator surrounding said generator rotor;
5 an exciter rotor carried by said shaft, and an exciter stator surrounding said exciter rotor;
said exciter rotor comprising rotor windings defining at least one pair of first and second rotor winding ends arranged in spaced relation, and at least one rotor winding series connector connecting said at least

- 10 one pair of first and second rotor winding ends together in series and comprising
- a C-shaped connector body having a medial connector portion and respective first and second end connector portions extending outwardly therefrom, and
- 15 first and second connector brackets carried by the respective first and second end connector portions and receiving respective first and second rotor winding ends therein.

17. A generator apparatus according to Claim 16 wherein said at least one pair of first and second rotor winding ends comprises a plurality of first rotor winding ends arranged in stacked relation and a plurality of second rotor winding ends arranged in stacked relation; and

5 wherein said at least one rotor winding series connector comprises a corresponding plurality thereof with one rotor winding series connector for each pair of first and second rotor winding ends.

18. A generator apparatus according to Claim 17 wherein said plurality of first and second rotor winding ends define progressively increasing spacings therebetween; and wherein said plurality of rotor winding series connectors have respective medial connector portions

5 having progressively increasing lengths to correspond to the progressively increasing spacings.

19. A generator apparatus according to Claim 17 further comprising insulating material between adjacent ones of said plurality of first rotor end windings, between adjacent ones of said plurality of second rotor end windings, and between adjacent ones of said plurality of rotor

5 winding series connectors.

20. A generator apparatus according to Claim 16 wherein said C-shaped connector body comprises a flexible conductive material.

21. A generator apparatus according to Claim 20 wherein

said flexible conductive material comprises a plurality of stacked metal layers.

22. A generator apparatus according to Claim 21 wherein each of said stacked metal layers comprises copper.

23. A generator apparatus according to Claim 16 wherein said at least one rotor winding series connector further comprises insulating material adjacent outer surface portions of at least one of said C-shaped connector body and said first and second connector brackets.

24. A generator apparatus according to Claim 16 wherein said at least one rotor winding series connector further comprises a respective brazed joint between said C-shaped body and adjacent portions of said first and second rotor winding ends.

25. A generator apparatus according to Claim 16 wherein each of said first and second connector brackets has an L-shape with a first leg extending outwardly from adjacent portions of said respective first and second end connector portions of said C-shaped connector body and
5 a second leg extending generally parallel thereto.

26. A method for using a rotor winding series connector to connect in series at least one pair of first and second rotor winding ends arranged on a rotor in spaced relation, the rotor winding series connector comprising a C-shaped connector body having a medial connector portion
5 and respective first and second end connector portions extending outwardly therefrom, and first and second connector brackets carried by the respective first and second end connector portions, the method comprising:

positioning the respective first and second rotor winding ends
10 into the respective first and second connector brackets to thereby connect the respective first and second rotor winding ends together in series.

27. A method according to Claim 26 further comprising selecting the rotor winding series connector so that the medial connector portion has a length corresponding to the space between the rotor winding ends.

28. A method according to Claim 26 further comprising brazing a respective joint between the C-shaped connector body and adjacent portions of the first and second rotor winding ends.